

**Amendments to the Claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) ~~Two-component~~ A two-pack polyurethane composition comprising a first pack and a second pack, wherein consisting  
the of a first component-pack A comprisingcomprises  
 at least one polyurethane prepolymer **A1** with isocyanate end groups,  
 synthesized from at least one polyisocyanate and at least one ~~polyol~~ polyol; and  
~~and a~~ the second component-pack B comprisingcomprises  
 water  
 as well as at least one polyaldimine **B1**, which is obtained from at least one  
 polyamine **PA** with aliphatic primary amino groups and at least one low-odor aldehyde **ALD**  
 as in formula (I) or formula (II),



where  $Y^1$  and  $Y^2$

either

each independently represent a hydrogen atom, a hydroxyl group, or an organic residue;

or

together represent a carbocyclic or heterocyclic ring, having a ring size between 5 and 8 atoms;

and Y<sup>3</sup>

either

stands for a substituted or unsubstituted alkyl group having at least one hetero atom;

or

stands for a branched or unbranched alkyl or alkylene group with at least 10 C atoms;

or

stands for a substituted or unsubstituted aryl or arylalkyl group;

or

stands for  $\text{O}-\text{R}^1$  or  $\text{O}-\overset{\text{O}}{\parallel}\text{C}-\text{R}^1$  or  $\overset{\text{O}}{\parallel}\text{C}-\text{O}-\text{R}^1$  or  $\overset{\text{O}}{\parallel}\text{C}-\text{R}^1$ , wherein R<sup>1</sup> stands for an aryl, arylalkyl, or alkyl group with at least 3 C atoms and in each case is substituted or unsubstituted;

and Y<sup>4</sup>

either

stands for a substituted or unsubstituted aryl or heteroaryl group, having a ring size between 5 and 8 atoms;

or

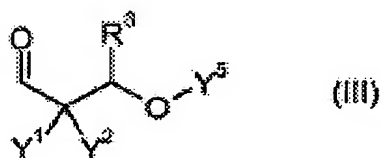
or stands for  $\overset{\text{O}}{\parallel}\text{C}-\text{R}^2$ , with R<sup>2</sup> = alkyl, hydroxyl, or alkoxy;

or

stands for a substituted or unsubstituted alkenyl or arylalkenyl group with at least 6 C atoms.

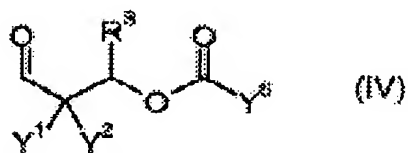
2. (Currently Amended) ~~Two-component~~ The two-pack polyurethane composition as in ~~Claim 1, claim 1,~~ wherein the heteroatom in  $Y^3$  is present in the form of an ether oxygen or a carboxyl, ester, or hydroxyl group.

3. (Currently Amended) ~~Two-component~~ The two-pack polyurethane composition as in ~~Claim 1, claim 1,~~ wherein the aldehyde **ALD** has formula (III),



where  $R^3$  and  $Y^5$  each independently stand for a hydrogen atom or for an alkyl or arylalkyl group.

4. (Currently Amended) ~~Two-component~~ The two-pack polyurethane composition as in ~~Claim 1, claim 1,~~ wherein the aldehyde **ALD** has formula (IV),



wherein

$R^3$  stands for a hydrogen atom or for an alkyl or arylalkyl group, and  $Y^6$

either

represents a hydrogen atom;

or

represents an alkyl or arylalkyl or aryl group, which optionally has at least one hetero atom, optionally contains at least one carboxyl group, and optionally contains at least one ester group;

or

or represents a monounsaturated or polyunsaturated, linear or branched hydrocarbon chain.

5. (Currently Amended) ~~Two-component~~ The two-pack polyurethane composition as in ~~Claim 4, claim 4,~~ wherein  $R^3$  stands for a hydrogen atom, and

$Y^6$

either

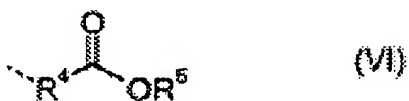
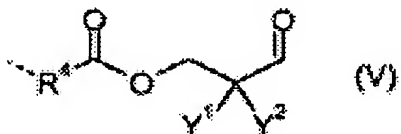
stands for a linear or branched alkyl chain with 11 to 30 carbon atoms, optionally with at least one hetero atom;

or

stands for a monounsaturated or polyunsaturated linear or branched hydrocarbon chain with 11 to 30 carbon atoms;

or

stands for a residue of formula (V) or (VI),



wherein

R<sup>4</sup> either

stands for a linear or branched or cyclic alkylene chain with 2 to 16 carbon atoms, optionally with at least one hetero atom;

or

stands for a monounsaturated or polyunsaturated, linear or branched or cyclic hydrocarbon chain with 2 to 16 carbon atoms;

and

R<sup>5</sup> stands for a linear or branched alkyl chain with 1 to 8 carbon atoms.

6. (Currently Amended) ~~Two-component~~ The two-pack polyurethane composition as in claim 4, wherein the aldehyde **ALD** used to synthesize the polyaldimine is obtained by means of an esterification reaction between a  $\beta$ -hydroxyaldehyde and a carboxylic acid, where the  $\beta$ -hydroxyaldehyde is synthesized, optionally *in situ*, from formaldehyde or paraformaldehyde and a second aldehyde.

7. (Currently Amended) ~~Two-component~~ The two-pack polyurethane composition as in ~~Claim 6, claim 6,~~ wherein the aldehyde **ALD** used to synthesize the polyaldimine is obtained by means of an esterification reaction between 3-hydroxypivalaldehyde and a carboxylic acid, where the 3-hydroxypivalaldehyde is synthesized, optionally *in situ*, from formaldehyde or paraformaldehyde and isobutyraldehyde.

8. (Currently Amended) ~~Two-component~~ The two-pack polyurethane composition as in ~~Claim 6, claim 6,~~ wherein the carboxylic acid used to synthesize the aldehyde **ALD** is selected from the group consisting of lauric acid, myristic acid, palmitic acid, stearic acid, oleic acid, linoleic acid, linolenic acid, succinic acid, adipic acid, azelaic acid, and sebacic acid, mixtures thereof, and their industrial mixtures with fatty acids.

9. (Currently Amended) ~~Two-component~~ The two-pack polyurethane composition as in claim 1, wherein  $Y^1 = Y^2 = \text{methyl}$ .

10. (Currently Amended) ~~Two-component~~ The two-pack polyurethane composition as in ~~Claim 1,~~ claim 1, wherein the aldehyde **ALD** has formula (I) and  $Y^1$  stands for a hydroxyl group,  $Y^2$  stands for a hydrogen atom, and  $Y^3$  stands for an alkyl group with at least one hydroxyl group.

11. (Currently Amended) ~~Two-component~~ The two-pack polyurethane composition as in claim 1, wherein the polyamine **PA** with aliphatic primary amino groups is selected from the group consisting of 1,6-hexamethylenediamine, MPMD, DAMP, 2,2,4- and 2,4,4 trimethylhexamethylenediamine, 4-aminomethyl-1,8-octanediamine, IPDA, 1,3- and 1,4 xylylenediamine, 1,3- and 1,4-bis(aminomethyl)cyclohexane, bis(4 aminocyclohexyl)methane, bis(4-amino-3-methylcyclohexyl)methane, 3(4),8(9) bis(aminomethyl)tricyclo[5.2.1.0<sup>2,6</sup>]decane, 1,2-, 1,3- and 1,4-diaminocyclohexane, 1,4 diamino-2,2,6-trimethylcyclohexane, polyoxyalkylene polyamines with two or three amino groups, and mixtures of two or more of the aforementioned polyamines.

12. (Currently Amended) ~~Two-component~~ The two-pack polyurethane composition as in claim 1, wherein for synthesis of the polyaldimine **B1**, the aldehyde **ALD** is used in stoichiometric proportion or in stoichiometric excess relative to the primary amino groups of the polyamine **PA**.

13. (Currently Amended) ~~Two-component~~ The two-pack polyurethane composition as in claim 1, wherein the water in the second ~~component-pack~~ pack **B** is present in free form or is reversibly bound to a carrier.

14. (Currently Amended) ~~Two-component~~ The two-pack polyurethane composition as in claim 1, wherein the second ~~component-pack~~ pack **B** has at least one water molecule per aldimine group.

15. (Currently Amended) ~~Two-component~~ The two-pack polyurethane composition as in claim 1, wherein the polyol for synthesis of the polyurethane prepolymer **A1** of the first ~~component-pack~~ A has an average number of OH groups equal to 1.6 to 3.

16. (Currently Amended) ~~Two-component~~ The two-pack polyurethane composition as in ~~Claim 15, claim 15,~~ wherein the polyol is a polyoxyalkylene polyol.

17. (Currently Amended) ~~Two-component~~ The two-pack polyurethane composition as in ~~Claim 15, claim 15,~~ wherein the polyol is a polyoxyalkylene polyol with a degree of unsaturation  $< 0.02$  meq/g and a molecular weight  $M_n$  from 1000 to 30 000 g/mol.

18. (Currently Amended) ~~Two-component~~ The two-pack polyurethane composition as in ~~Claim 17, claim 17,~~ wherein the polyol is a polyol synthesized by means of DMC catalysis.

19. (Currently Amended) ~~Two-component~~ The two-pack polyurethane composition as in claim 1, wherein the polyurethane prepolymer **A1** in the first ~~component-pack~~ A and the polyaldimine **B1** in the second ~~component-pack~~ B are present in a ratio from 0.1 to 0.99 equivalents of aldimine groups per equivalent of isocyanate groups.

20. (Currently Amended) ~~Method A method for mixing a two-component the two-~~ pack polyurethane composition as in claim 1, ~~wherein~~ wherein contents of the first component-pack A and contents of the second component-pack B are blended by essentially uniform mixing.

21. (Currently Amended) ~~Method A method for mixing a two-component the two-~~ pack polyurethane composition as in claim 1, wherein contents of the first component-pack A and contents of the second component-pack B are blended by essentially laminar mixing.

22. (Currently Amended) ~~Method~~ The method for mixing as in ~~Claim 20, claim 20,~~ wherein the mixing ~~of the two components A and B~~ is carried out by means of a dispensing

attachment containing two interlocking dispensing rotors, and optionally by means of a static mixer mounted at the outlet of this dispensing attachment.

23. (Currently Amended) ~~Method~~ A method for application of ~~a two-component~~ the two-pack polyurethane composition as in claim 1, the method comprising:

- ~~Mixing of contents of the two components~~ packs A and B; B to form a mixed polyurethane composition;

- Making contact between at least one solid surface and the mixed polyurethane composition; and

- Curing the mixed polyurethane composition.

24. (Currently Amended) ~~Method~~ The method for application as in ~~Claim 23,~~ claim 23, wherein the contact with the solid surface is made by applying a bead to the surface.

25. (Canceled)

26. (Currently Amended) ~~Article~~ An article which is tightly bonded with a mixed and cured ~~two-pack two-component~~ polyurethane composition as in claim 1.